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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/631,723	08/03/2000	Richard Louis Arndt	AUS9-2000-0316-US1	9219

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EXAMINER

LEE, CHRISTOPHER E

ART UNIT

PAPER NUMBER

2189

DATE MAILED: 03/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/631,723

Applicant(s)

ARNDT ET AL.

Examiner

Christopher E. Lee

Art Unit

2189

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Receipt Acknowledgement

1. Receipt is acknowledged of the Amendment filed on 3rd of February, 2003. Claims 1, 2, 4, 5, 8-12 and 15-19 have been amended; no claims has been canceled; and no claims has been newly added. Currently, claims 1-21 are pending in this application.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1, 3, 8, 10, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahrens et al. [US 6,230,265 B1; hereinafter Ahrens'265] in view of Berglund et al. [US 6,044,411; hereinafter Berglund].

Referring to claims 8 and 15, Ahrens'265 discloses a computer program product (i.e., firmware in SPCN controller 36, SP memory 52 and system memory 34 in Fig. 1) in a computer readable media (SPCN controller 36, SP memory 52 and system memory 34 in Fig. 1) for use in a data processing system (data processing system 10 of Fig. 1) for managing (i.e., initializing and configuring) input/output drawers (See Fig. 2 and col. 3, line 39 through col. 5, line 60) within said data processing system, said computer program product comprising: first instructions for indicating how many input/output drawers are supplied power (i.e., power information; See col. 3, lines 50-52); and second instructions for storing said indication in memory (SP memory 52 of Fig. 1; See col. 3, lines 47-50).

Ahrens'265 does not disclose expressly said first and second instructions further comprising: said first instructions for assigning a unique identifier to each of a plurality of input/output drawers; and said second instructions for storing said unique identifier in memory.

Berglund discloses a method and apparatus for correlating computer system device physical location with logical address, wherein first means for assigning (i.e., defining) a unique identifier (i.e., unique physical

location address; See col. 7, lines 40-44 and 47) to each of a plurality of input/output drawers (i.e., backplane 113, 113A, 113B1 and 113B2 in Fig. 1A-C); and second means for storing (i.e., writing) said unique identifier in memory (See col. 7, lines 44-48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said first and second means, as disclosed by Berglund, in said computer program product, as disclosed by Ahrens'265, for the advantage of providing said unique identifier (i.e., physical location information) is instantly available to an operating system when a logical addresses are assigned thereby (See Berglund, col. 7, lines 58-61).

Ahrens'265, as modified by Berglund, teaches said computer program product, wherein said unique identifier (i.e., unique physical location address; Berglund) is used by an operating system to identify said plurality of input/output drawers regardless of how said input/output drawers are interconnected by cables (See Berglund, Abstract; i.e., wherein in fact that an operating system uses said stored physical location indication to correlate logical addresses to physical location implies said unique identifier is used by an operating system to identify said plurality of input/output drawers (viz., to indicate location of said plurality of input/output drawers; Berglund) regardless of how said input/output drawers are interconnected by cables (viz., through said correlation between said input/output drawers and said logical addresses of them; See Berglund, col. 14, lines 23-26), such that addresses (i.e., unique physical location address; See Berglund, col. 7, lines 12-39) used when accessing devices (e.g., PCI slots 1 to 8) contained within said plurality of input/output drawers (i.e., backplane 113, 113A, 113B1 and 113B2 in Fig. 1A-C) do not change when reconfiguring at least one of said input/output drawers within said data processing system (See col. 7, lines 12+; i.e., wherein in fact that SPCN electronically determines the backplanes in the enclosures and build a mapping of logical address to physical location address for each backplane and its slots implies that system firmware dynamically discovers the I/O drawers and assigned memory mapping to each one of drawers and its PHBs. This implication supports that the limitation "addresses

used when accessing devices contained within said plurality of input/output drawers do not change when reconfiguring at least one of said input/output drawers within said data processing system”).

Referring to claim 1, the method steps of claim 1 are inherently performed by the apparatus of claim 15, and therefore the rejection of claim 15 applies to claim 1.

Referring to claims 10 and 17, Ahrens’265 discloses said first and second instructions are executed in a service processor (microprocessor of SPCN controller 36 and SP 50 in Fig. 1 as combined). Refer to col. 3, lines 39-67.

Referring to claim 3, the method steps of claim 3 are inherently performed by the apparatus of claim 17, and therefore the rejection of claim 17 applies to claim 3.

4. Claims 2, 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahrens’265 [US 6,230,265 B1] in view of Berglund [US 6,044,411] as applied to claims 1, 3, 8, 10, 15 and 17 above, and further in view of Sidhu et al. [US 5,884,322; hereinafter Sidhu].

Referring to claims 9 and 16, Ahrens’265, as modified by Berglund, discloses all the limitations of the claims 9 and 16 except that does not teach third instructions, responsive to a determination that a new input/output drawer has been added to said data processing system, for assigning a new unique identifier to said new input/output drawer.

Sidhu discloses a method and apparatus for creating and assigning unique identifiers for network entities and data base items in a networked computer system, wherein third instructions, responsive to a determination (See block 100 in Fig. 4) that a new input/output drawer (i.e., new server entity) has been added (i.e., installed) to said data processing system (i.e., networked computer system 10 of Fig. 1; See col. 10, lines 23-25), for assigning (See block 104 in Fig. 4) a new unique identifier (i.e., unique server identification) to said new input/output drawer (i.e., new server entity; See col. 10, lines 30-31), wherein said new unique identifier is different from any of said unique identifiers previously assigned (See col. 10, lines 32-35 and col. 11, lines 37-40), such that each of said plurality of input/output drawers (i.e., server

entities) maintains the same unique identifier (See col. 10, lines 58-61; i.e., wherein in fact that a server entity (i.e., input/output drawer) assigns a unique identification (i.e., unique identification) from its set of available server identifications and removes the assigned identification from the set implies each of said plurality of input/output drawers (i.e., server entities) maintains the same unique identifier (i.e., the same unique identification)).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said third instructions, as disclosed by Sidhu, in said computer program product, as disclosed by Ahrens'265, as modified by Berglund, for the advantage of providing a means for appropriating identifications in a manner which is consistent with input/output drawer use (i.e., network use), thereby reducing the number of unique identifications (i.e., the number of identifications) that remain dormant because of inactivity on said input/output drawer (i.e., the server) which owns those identifications (See Sidhu, col. 4, lines 17-21).

Referring to claim 2, the method steps of claim 2 are inherently performed by the apparatus of claim 16, and therefore the rejection of claim 16 applies to claim 2.

5. Claims 4, 6, 7, 11, 13, 14, 18, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahrens'265 [US 6,230,265 B1] in view of Berglund [US 6,044,411] and Sidhu [US 5,884,322] as applied to claims 2, 9 and 16 above, and further in view of Lortz et al. [US 6,041,364; hereinafter Lortz].

Referring to claims 11 and 18, Ahrens'265, as modified by Berglund and Sidhu, discloses all the limitations of the claims 11 and 18 except that does not teach said unique identifier and said new unique identifier are stored in a device tree.

Lortz teaches a system for adding a device entry to a device tree upon detecting the connection of a device, wherein said device tree (Fig. 2C) stores unique identifier (address, name and location on Device #1 272 of Fig. 2C) and an added new unique identifier (See col. 6, lines 41-44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said device tree, as disclosed by Lortz, in said data processing system, as disclosed by Ahrens'265, as modified by Berglund and Sidhu, for the advantage of providing a way for associating an input/output drawer (i.e., smart device; Lortz) with particular device driver for said input/output drawer (i.e., software components, device functions, or software categories; Lortz). Refer to Lortz, col. 2, line 55 through col. 3, line 3.

Referring to claim 4, the method steps of claim 4 are inherently performed by the apparatus of claim 18, and therefore the rejection of claim 18 applies to claim 4.

Referring to claims 13 and 20, Lortz discloses said device tree is stored in a system memory (computer readable medium 240 of Fig. 2A).

Referring to claim 6, the method steps of claim 6 are inherently performed by the apparatus of claim 20, and therefore the rejection of claim 20 applies to claim 6.

Referring to claims 14 and 21, Ahrens'265, as modified by Berglund and Sidhu, discloses all the limitations of the claims 14 and 21 except that does not teach fourth instructions for updating a device tree to reflect a configuration of said data processing system after inclusion of said new input/output drawer. Lortz teaches a system for adding a device entry to a device tree upon detecting the connection of a device, wherein fourth instructions (device tree search instructions 284 of Fig. 2A) for updating said device tree (i.e., adding to a device tree in Fig. 2C; See col. 6, lines 41-44) to reflect a configuration of said data processing system (See col. 6, lines 36-60) after inclusion of said new input/output drawer (See col. 6, lines 41-63).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included said device tree with said fourth instructions, as disclosed by Lortz, in said data processing system, as disclosed by Ahrens'265, as modified by Berglund and Sihdu, for the advantage of providing a way for associating an input/output drawer (i.e., smart device; Lortz) with particular device

driver for said input/output drawer (i.e., software components, device functions, or software categories; Lortz). Refer to col. 2, line 55 through col. 3, line 3 of Lortz.

Referring to claim 7, the method steps of claim 7 are inherently performed by the apparatus of claim 21, and therefore the rejection of claim 21 applies to claim 7.

6. Claims 5, 12 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahrens'265 [US 6,230,265 B1] in view of Berglund [US 6,044,411] and Sidhu [US 5,884,322] as applied to claims 2, 9 and 16 above, and further in view of Ahrens et al. [US 6,148,419; hereinafter Ahrens'419].

Referring to claims 12 and 19, Ahrens'265, as modified by Berglund and Sidhu, discloses all the limitations of the claims 12 and 19 except that does not teach said unique identifier comprise device nodes and location codes.

Ahrens'419 discloses a data processing system 100 (Fig. 1), wherein a unique identifier (i.e., architected location code; See Fig 2 and col. 2, line 51) comprise device nodes (i.e., particular I/O adapter NNNN...N of display 103 in Fig. 2) and location codes (i.e., x for rack/cabinet and y for I/O drawer of display 103 in Fig. 2). Refer to col. 2, lines 51-54.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied said architected location code, as disclosed by Ahrens'419, to said unique identifier, as disclosed by Ahrens'265, as modified by Berglund and Sihdu, for the advantage of providing an indication of said input/output drawer location for said data processing system, which could be used for displaying said unique identifier (i.e., architected location code; Ahrens'419) on an LCD display 103 (Fig. 1; Ahrens'419) for the convenience of eliminating the need for tracing cables from the processor (101 (Fig. 1; Ahrens'419) through each of said input/output drawers when an error occurs (See col. 1, lines 44-50 of Ahrens'419).

Referring to claim 5, the method steps of claim 5 are inherently performed by the apparatus of claim 19, and therefore the rejection of claim 19 applies to claim 5.

Response to Arguments

7. *In response to the Applicant's argument with respect to* "Claims 1-21 have been amended to recite that addresses used when accessing devices contained within said plurality of input/output drawers do not change when reconfiguring at least one of the input/output drawers within the data processing system. ... None of the cited references teach or suggest this claimed feature, which addresses a problem of system configuration when drawers are inserted, removed or rearranged..." in Amendment filed on 3rd of February, 2003 (hereinafter Amendment), pages 10-11, Paragraphs A-D, the Examiner respectfully disagrees. In contrary to the Applicant's statement, Berglund obviously teaches and suggests the limitation in the amended claims. (See the instant Office Action, Paragraph 3, the claims 1, 3, 8, 10, 15 and 17 rejection under 35 U.S.C. 103(a) as being unpatentable over Ahrens in view of Berglund). Thus, the Applicant's argument on this point is not persuasive.

8. *In response to the Applicant's argument in Amendment, pages 11-12 that the Examiner's* conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, the Applicant alleges that "the Examiner states that it would have been obvious to have included first and second means, as disclosed by Berglund, in said computer product, as disclosed by Ahrens'265, for the advantage of providing said unique location is instantly available to an operating system when a logical addresses are assigned thereby. Applicants show, however, that Ahrens requires that I/O drawers by installed sequentially (Col. 4, lines 57-62) to provide a known system configuration, so there would be no reason or motivation to include physical location determination teachings from Berglund. The only motivation for such combination comes from Applicants' own invention, which is

improper hindsight analysis. ... “. In contrary to the Applicant’s allegation, Ahrens states that the **exemplary embodiment** of data processing system requires that I/O drawers be installed sequentially, with the I/O drawer containing service processor directly connected to port 1 of I/O hub, the second I/O drawer, if any, directly connected to port 2 of I/O hub, etc. **in order to arise an ambiguous configuration** (See Fig. 2 and col. 4, lines 57-66), which does not show the Applicant’s statement such that Ahrens requires that I/O drawers by installed sequentially to provide a known system configuration. Therefore, there is enough reason and motivation to include physical location determination teachings from Berglund into Ahrens, which is rationale (See the instant Office Action, Paragraph 3, the claims 1, 3, 8, 10, 15 and 17 rejection under 35 U.S.C. 103(a) as being unpatentable over Ahrens in view of Berglund). Thus, the Applicant’s argument on this point is not persuasive.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

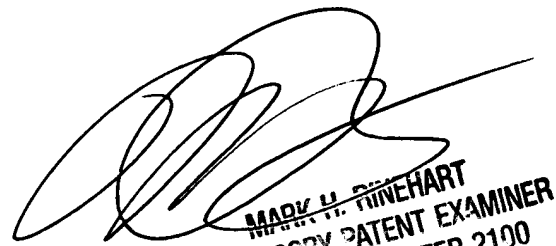
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher E. Lee whose telephone number is 703-305-5950. The examiner can normally be reached on 9:00am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 703-305-4815. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Christopher E. Lee
Examiner
Art Unit 2189

CEL/ *CE*
March 3, 2003



MARK H. RINEHART
SUPERVISORY PATENT EXAMINER
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